

PATENT COOPERATION TREATY

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NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
 United States Patent and Trademark
 Office
 Box PCT
 Washington, D.C.20231
 ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 04 November 1999 (04.11.99)	
International application No. PCT/GB99/00582	Applicant's or agent's file reference SJK/BP5758875
International filing date (day/month/year) 26 February 1999 (26.02.99)	Priority date (day/month/year) 26 February 1998 (26.02.98)
Applicant DURRANT, Linda, Gillian et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

27 September 1999 (27.09.99)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Marc Salzman Telephone No.: (41-22) 338.83.38
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PATENT COOPERATION TREATY

WO 99/43800
PCT/GB99/00582

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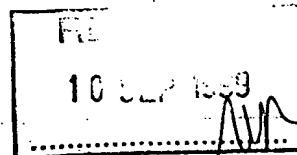
NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

From the INTERNATIONAL BUREAU

To:

KIDDLE, Simon, J.
Mewburn Ellis
York House
23 Kingsway
London WC2B 6HP
ROYAUME-UNI



Date of mailing (day/month/year) 02 September 1999 (02.09.99)		IMPORTANT NOTICE	
Applicant's or agent's file reference SJK/BP5758875			
International application No. PCT/GB99/00582	International filing date (day/month/year) 26 February 1999 (26.02.99)	Priority date (day/month/year) 26 February 1998 (26.02.98)	
Applicant CANCER RESEARCH CAMPAIGN TECHNOLOGY LIMITED et al			

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:
AU,CN,EP,IL,JP,KP,KR,US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:
AL,AM,AP,AT,AZ,BA,BB,BG,BR,BY,CA,CH,CU,CZ,DE,DK,EA,EE,ES,FI,GB,GD,GE,GH,GM,HR,HU, ID,IN,IS,KE,KG,KZ,LC,LK,LR,LS,LT,LU,LV,MD,MG,MK,MN,MW,MX,NO,NZ,OA,PL,PT,RO,RU,SD, SE,SG,SI,SK,SL,TJ,TM,TR,TT,UA,UG,UZ,VN,YU,ZW
The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).
3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on
02 September 1999 (02.09.99) under No. WO 99/43800

REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer J. Zahra
Facsimile No. (41-22) 740.14.35	Telephone No. (41-22) 338.83.38

Continuation of Form PCT/IB/308

**NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF
THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES**

Date of mailing (day/month/year) 02 September 1999 (02.09.99)	IMPORTANT NOTICE
Applicant's or agent's file reference SJK/BP5758875	International application No. PCT/GB99/00582
<p>The applicant is hereby notified that, at the time of establishment of this Notice, the time limit under Rule 46.1 for making amendments under Article 19 has not yet expired and the International Bureau had received neither such amendments nor a declaration that the applicant does not wish to make amendments.</p>	

FOR THE PURPOSES OF INFORMATION ONLY

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CA	Canada	IT	Italy	NE	Niger	UZ	Uzbekistan
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CN	China	KZ	Kazakhstan	RO	Romania		
CU	Cuba	LC	Saint Lucia	RU	Russian Federation		
CZ	Czech Republic	LI	Liechtenstein	SD	Sudan		
DE	Germany	LK	Sri Lanka	SE	Sweden		
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PATENT COOPERATION TREATY

PCT

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REC'D 25 OCT 2000

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference SJK/BP5758875	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB99/00582	International filing date (day/month/year) 26/02/1999	Priority date (day/month/year) 26/02/1998
International Patent Classification (IPC) or national classification and IPC C12N15/12		
Applicant CANCER RESEARCH CAMPAIGN TECHNOLOGY LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 8 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 27/09/1999	Date of completion of this report 14.07.2000
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80293 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Paresce. D Telephone No. +49 89 2399 8995 

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB99/00582

I. Basis of the report

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

Description, pages:

1-51 as originally filed

Claims, No.:

1-26 as originally filed

Drawings, sheets:

1/23-23/23 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB99/00582

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	2, 20-26
	No:	Claims	18
Inventive step (IS)	Yes:	Claims	2, 20-26
	No:	Claims	1, 3-17, 19
Industrial applicability (IA)	Yes:	Claims	1-18, 20-26
	No:	Claims	

2. Citations and explanations

see separate sheet

VI. Certain documents cited

1. Certain published documents (Rule 70.10)

and / or

2. Non-written disclosures (Rule 70.9)

see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

- 1) The documents mentioned in this communication are numbered as in the search report, i.e. D1 corresponds to the first document of the search report.
- 2) D1 discloses the cloning of decay-accelerating factor (DAF or CD55), a glycoprotein that is anchored to the cell membrane by a phosphatidylinositol. From the nucleotide and deduced amino acid sequence of human DAF provided in Figure 1 of D1, it is apparent that the coding region of DAF is identical to that of 791Tgp72. This information, moreover, is clearly stated in the description of the present application (see p. 4, 11, 12). It is stated on p. 12 of the present application that "antigen 791Tgp72 has an identical amino acid sequence to that of CD55 as shown in Figure 10". Furthermore, D1 discloses different DAF messenger RNAs caused by alternative splicing and both mRNAs are found on polysomes, suggesting both mRNAs are translated. One DAF mRNA encodes a membrane- bound DAF whereas another DAF mRNA encodes a secreted protein (see D1, abstract). These different DAF mRNA, therefore, encode polypeptides having variations in amino acid sequence compared to CD55.

D2 discloses monoclonal antibody, anti-idiotypic and antigen based vaccines for colorectal target antigens, in particular the 791Tgp72 antigen (see abstract). D2 also describes a human monoclonal anti-idiotypic antibody, 105AD7, which mimics a colorectal tumour-associated antigen, 791Tgp72 (see p. 729).

D3 describes the use of the monoclonal anti-idiotypic antibody, 105AD7, in the therapeutic and prophylactic treatment of tumours and as a therapeutic vaccine (see abstract and p. 1)

D4 discloses that CD55 is over-expressed on a wide range of tumours. D4 shows that gastric, colon and pancreatic human cancer cell lines all strongly expressed CD55 (see abstract).

Although CD55 is over-expressed on a wide range of tumours, it is also expressed

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/00582

on normal red blood cells, leukocytes, endothelial cells, and surface epithelial cells (present application, p.7). CD55 was also believed to prevent the recruitment of activated complement against cells expressing it (D4). Therefore, from the teachings of D1 and D4 the skilled person would expect that a vaccine comprising CD55 would not work or would induce self-antibodies making CD55 a very unlikely target for T-cell immunotherapy (present application, p.42).

The solution, provided by the present application, to the problem of providing a cancer vaccine can be viewed as the provision of a specific polypeptide of the CD55 family, the "791Tgp72 antigen". The amino acid and DNA sequence of the 791Tgp72 antigen is identical to DAF (or CD55) as disclosed in D1. There are, however, differences between the 791Tgp72 and CD55 proteins. There are differences in specificity of different antibodies for 791Tgp72 compared to other forms of CD55. These differences may be due to different glycosylation patterns of the two proteins. More importantly, an antibody to 791Tgp72 (791T/36) shows strongest binding to tumour cells whereas an anti-CD55 monoclonal antibody binds better to erythrocytes. In fact, the invention underlying the present application is based on the observation that the binding of 791T/36 to tumour cells shows higher affinity than binding to red blood cells (present application, p.7).

However, the IPEA is of the opinion that although the "791Tgp72 antigen" presents unexpected effects or properties in relation to other proteins of the CD55 family, the subject-matter of claims 1, 3-19 does not fulfill the requirements of Article 35(2) as well as Article 5 and 6 PCT (see paragraph VII below). Claim 1 is directed not to the 791Tgp72 antigen but in general to a polypeptide of the CD55 family as well as to a fragment or derivative of a polypeptide of the CD55 family. Unless claim 1 and dependent claims 3-19 are restricted to the specific polypeptide having a surprising effect, the IPEA cannot at present recognize an inventive step for said claims which fulfill the requirements of Article 33(3) PCT.

Furthermore claim 18 is not considered novel because a statement of purpose, in a claim to a product may impose little or no limiting effect on the definition of the product as such. According to PCT Guidelines IV-7.6, a known product, which *prima facie* is the same as the substance or composition defined in the claim and is in a form suitable for the intended purpose (cancer medicament), though it has

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/00582

never been described for that use, would nevertheless deprive the claim of novelty.

The subject-matter of claims 2, 20-26 has not been made available to the public by any of the available prior art documents and can therefore be regarded as novel.

The subject-matter of claims 2, 20-26 cannot be derived from the available prior art in an obvious manner and therefore complies with the requirements of Article 33(3) PCT.

VI: Certain documents cited

Certain published documents (Rule 70.10)

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO9833523	06.08.98	02.02.98	31.01.97

VIII. Certain observations on the international application

1) Clarity: Article 6 PCT

In view of the homology (100% identity) between the amino acid and DNA sequences of DAF (or CD55) with those of the 791Tgp72 antigen, the IPEA considers that the 791Tgp72 antigen must be clearly distinguished from other known forms of CD55, in order to fulfill the requirements of Article 6 PCT. The technical features given in claims 20-23 do not allow one to distinguish the protein of the present application with CD55. Moreover, the term "791Tgp72 antigen" is not suitable to define the scope of the claim. The use of an internal arbitrary designation of a protein is meaningless to the person skilled in the art and does not constitute a definition through technical means as required by Article 6 PCT. The protein should be, generally, clearly and unambiguously characterized e.g. by reference to technical features, (e.g. glycosylation patterns) in order to satisfy the requirements of Article 6 PCT. The term "obtainable by" used in claim 23 is not a

limiting feature which would render the protein novel over prior art. The fact that a product is produced by means of a new process does not render this product novel.

The terms "a fragment of", and "a derivative of" are vague and unclear and leave the reader in doubt as to the meaning of the technical features to which it refers, thereby rendering the definition of the subject-matter of said claim unclear (Article 6 PCT).

Claims 1, 22 does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The subject-matter of these claims is too imprecisely drafted and merely paraphrases the technical problem with which the application is concerned. The claims attempt to define the subject-matter in terms of the result to be achieved which merely amounts to a statement of the underlying problem. The technical features necessary for achieving this result should be added.

2) Objections under Article 6 PCT in combination with Article 5 PCT

Claims 1, 3-19 are not supported by the description as required by Article 6 PCT, as their scope is broader than justified by the description and drawings. The reasons therefor are the following:

Article 6 PCT requires the claims to be fully, i.e. formally and technically, supported by the description. In the present application, the 791Tgp72 antigen is described. There is no real technical characterization, however, of a cancer vaccine comprising CD55. There is not a single example in the present application in which CD55 is used for preparing a cancer vaccine wherein the vaccine is capable of inducing an immune response or for treating cancer. There is no information given in the present application that would enable the skilled person to determine which of the several different forms of CD55 is needed to prepare a cancer vaccine. There is, in fact, no indication that the claimed sequences are in fact suitable for use in the methods of these claims. The information given in the specification is insufficient to enable a skilled person to prepare a cancer vaccine without undue experimentation or without application of inventive skill. Thus the

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/00582

IPEA is of the opinion that claims 1, 3-19 that are not actually disclosed or technically well characterized in the sense of Article 5 PCT, are not supported by the description.

3) Additional comments

Claim 19 relates to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of this claim (Article 34(4)(a)(i) PCT).

For the assessment of the present claim 19 on the question whether it is industrially applicable, no unified criteria exist in the PCT Contracting States. The patentability can also be dependent upon the formulation of the claims. The EPO, for example, does not recognize as industrially applicable the subject-matter of claims to the use of a compound in medical treatment, but may allow, however, claims to a known compound for first use in medical treatment and the use of such a compound for the manufacture of a medicament for a new medical treatment.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/GB 99/ 00582

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
Remark: Although claim 19 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims: it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference SJK/BP5758875	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GB 99/ 00582	International filing date (day/month/year) 26/02/1999	(Earliest) Priority Date (day/month/year) 26/02/1998
Applicant CANCER RESEARCH CAMPAIGN TECHNOLOGY LIMITED et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☒ furnished subsequently to this Authority in written form.
- ☒ furnished subsequently to this Authority in computer readable form.
- ☒ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☒ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

- ☐ as suggested by the applicant.
- ☐ because the applicant failed to suggest a figure.
- ☐ because this figure better characterizes the invention.

☒ None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/GB 99/00582

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
Remark: Although claim 19 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/00582

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C12N15/12 C07K14/705 A61K38/17

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 C12N C07K A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CARAS, I.W. ET AL.: "Cloning of decay-accelerating factor suggests novel use of splicing to generate two proteins." NATURE, vol. 325, 5 February 1987 (1987-02-05), pages 545-8, XP002109227 the whole document	20-25
A	DURRANT, L.G.: "Cancer vaccines." ANTI-CANCER DRUGS, vol. 8, no. 8, September 1997 (1997-09), pages 727-33, XP002109228 abstract	1-25
A	WO 97 32021 A (CANCER RES CAMPAIGN TECH ; SPENDLOVE IAN (GB); ROBINS RICHARD ADRIA) 4 September 1997 (1997-09-04) the whole document	

-/-

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

14 July 1999

Date of mailing of the international search report

27/07/1999

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Smalt, R

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/00582

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JUHL, H. ET AL.: "Frequent expression of complement resistance factors CD46, CD55, and CD59 on gastrointestinal cancer cells limits the therapeutic potential of monoclonal antibody 17-1A." JOURNAL OF SURGICAL ONCOLOGY, vol. 64, no. 3, March 1997 (1997-03), pages 222-30, XP002109229 abstract	
A	EP 0 685 739 A (TSUJI TAKAO ;SANKO JUNYAKU KK (JP)) 6 December 1995 (1995-12-06) the whole document	
P,X	SPENDLOVE, I. ET AL.: "Purification of 791Tgp72 antigen." IMMUNOLOGY, vol. 95, no. Suppl., December 1998 (1998-12), pages 32-Abstr.10.13, XP002109230 the whole document	1-25
P,X	WO 98 33523 A (BIOVATION LIMITED ;CARR FRANK JOSEPH (GB); CARTER GRAHAM (GB)) 6 August 1998 (1998-08-06) page 20, line 8 - line 18; claim 20	1-19
T	SPENDLOVE, I. ET AL.: "105AD7 anti-idiotypic antibody is able to stimulate immune responses to and show similarity to a member of the DAF family." PROCEEDINGS OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH, vol. 39, March 1998 (1998-03), pages 264-Abstr.1805, XP002109231 the whole document	1-26

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Information on patent family members

International Application No

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Patent document cited in search report			Publication date	Patent family member(s)		Publication date
✓	WO 9732021	A	04-09-1997	AU	2225297 A	16-09-1997
	EP 0685739	A	06-12-1995	JP	7322888 A	12-12-1995
				US	5695945 A	09-12-1997
	WO 9833523	A	06-08-1998	AU	5874798 A	25-08-1998